

REMARKS

Claims 1-24 are currently pending in the application. No claims have been amended, added or canceled. Accordingly, following the entry of the present amendment, claims 1-24 will be pending in the application.

Claims 1-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,477,561 B1 to Robsman (hereinafter referred to as "Robsman") in view of U.S. Published Patent Appl. No. 2001/0030970 to Wiryaman et al. (hereinafter referred to as "Wiryaman"). Applicants respectfully traverse the rejection.

Independent claim 1 is directed to a method performed on at least one processor for multiplexing applications, the method comprising (a) providing at least one access server that has access to at least one application, the at least one application capable of having a plurality of running instances, each of the instances capable of receiving and processing requests for a first service provided by the application during a session with a client; (b) receiving a request from at least one client at the access server to access the first service provided by the at least one application; (c) based on the received request, establishing a communication link between the at least one access server and the at least one client; (d) storing the received request in an input request queue with other received requests, wherein the number of received requests may be greater than the number of running instances; (e) checking for an available communication path to the requested application, an available communication path being present when an instance of the requested application is available and ready to accept a new request; (f) when an available communication path is available, establishing the communication path between the input request queue and the at least one application; (g) removing the stored request; (h) sending the stored request to the requested application; and (i) establishing a communication path between the client and the requested application, thereby establishing a session with the client and the requested application and providing the first service to the client.

It is submitted that the Examiner has not established *prima facie* obviousness based on the cited references. In particular, the cited references do not teach or suggest all of the limitations as claimed in claim 1. Furthermore, even assuming, *arguendo*, that the references do

teach or suggest all of the claim limitations, there is no suggestion or motivation to combine the references. Each reference will be discussed in turn.

Robsman is directed to thread optimization on a computer capable of executing multiple execution threads. Particularly, Robsman is directed to varying the number of available threads that are available for processes running on a computer, and describes a method of calling a gating function for each thread that is executed. As discussed in Robsman at col. 4, lines 57-59, "two function calls are inserted in the threads themselves to regulate the number of threads that are active at any given time." Robsman specifically describes, at col. 4 line 67 through col. 5 line 1 that the "functions keep a current count of the number of 'active' execution threads." Furthermore, Robsman describes in col. 5 lines 4-9 that "[t]he functions also maintain a variable limit of the number of active execution threads. Before allowing a thread to continue, the gating function compares the number of active threads to a variable limit. If the limit has already been met, the thread is temporarily delayed." Robsman goes on to describe, with respect to Fig. 5 the adjustment of the number of available threads. As described at col. 6 lines 11-39, the adjustment of the number of available threads is based on processor utilization at the time the adjustment function is called. In such a manner, the system of Robsman controls the number of active threads to provide efficient processor usage.

To the contrary, the present invention, as claimed in claim 1, is directed to multiplexing an application in which *a client establishes a session with an application* in order to receive a first service provided by the application. In such a manner, the first service is available for use by the requesting client through the access server. The access server, as required by the claim, stores received requests in an input request queue, checks for an available communication path to the application, establishes a communication link between the application and the requesting client when a communication path is available, thereby *establishing a session with the first application and the client*. In such a manner, multiple clients may access the first service that is provided by a particular application. Importantly, the access server queues requests for the first service and establishes a communication link to the application when a communication path is available to the application. Robsman does not contemplate such an access server that checks for communication paths to particular application and establishing a session between a client and application because Robsman is directed to controlling threads to allocate processing resources.

The Examiner appears to interpret the claimed running instances of an application as being threads, and cites Robsman col. 4 lines 41-54 as teaching such threads. The Examiner goes on to state that Robsman checks for available threads and sends a stored request to the available thread. To the contrary, the present invention, as claimed in claim 1, requires checking for an available *communication path* to a requested application and, when a communication path is available, *establishing a communication path between the client and requested application thereby establishing a session*. Robsman merely monitors the number of available threads, and adjusts the number of available threads based on processor utilization.

Wiryaman is directed to a network access device. The access device optimizes network traffic, or bandwidth, by examining the routing information (e.g. network addresses) on packets sent over the network and seeks to improve network performance by a combination of prioritization and proxying. As described at page 2, paragraph 49, “[a]ccess device 220 is a device that monitors traffic flowing through it, implements a user interface for setting configurable policies based on the characteristics of the monitored traffic, and enforces the configured policies.” Further, paragraph 50 on page 3 explains “the policies that are enforced by access device 220 relate to allocation and use of communication resources related to communication passing between LAN 130 and WAN 110.” The policies described include prioritization, where some packets are allowed to proceed over the network (WAN 110) while others are held back to reduce congestion, as described at page 4, paragraphs 63-64. Wiryaman discloses that a policy table may be used that specifies how different classes of inbound or outbound data flows are to be processed. The policies may also include proxying, where packets of data are re-routed to less busy/congested destinations that are deemed to be equivalent to the original destination recorded in the incoming data packet, as described at paragraph 65 on page 5. Importantly, Wiryaman is directed to data packets transmitted over a data network, in which traffic over one or more network devices is sought to be optimized.

To the contrary, the present invention, as claimed, is directed to multiplexing applications, and running instances of applications that process requests from one or more clients. In this manner, the present invention helps deploy applications efficiently and cost effectively by queuing requests to applications and forwarding the application request when a communication path to the application is available, such an available communication path being

present when an instance of the requested application is available and ready to accept a new request. The Examiner asserts that it would be obvious to combine Wiryaman and Robsman for remote client and servers. However, even if these references are combined, all of the claim limitations are not taught or suggested. In particular, the references contain no disclosure of checking for available communication paths to an application and establishing a session with a client and requested application by establishing a communication path between the client and requested application in order to provide a service to the client. Thus, none of the cited references, taken alone or in combination, contain any teaching or suggestion for all of the steps of the method as claimed in claim 1.

Furthermore, it is submitted that there is no suggestion or motivation to combine the references. As discussed above, Robsman is directed to thread optimization, and in particular to controlling the number of threads executing on a processor based on processor utilization. Wiryaman, as discussed above, is directed to a network access device that optimizes network traffic by examining the routing information on packets sent over the network. Neither of the references provide any suggestion or motivation for combining the references. Given that there is no suggestion or motivation in the references themselves, the Examiner must find that the suggestion or motivation to combine the references would be within the knowledge generally available to one of ordinary skill in the art. Applicants submit that, given the cited references are from vastly different fields of endeavor (thread optimization and routing of network traffic), one of ordinary skill in the art would have no suggestion or motivation to combine the references. In the event that the Examiner believes that such suggestion or motivation would have been available to one of ordinary skill in the art, Applicants respectfully request that the Examiner provide particular findings as to the reason a skilled artisan, with no knowledge of the claimed invention, would have selected teachings of these references for combination in the manner claimed.

Accordingly, it is submitted that claim 1 is patentable over the cited references. Furthermore, claims 2-8, which depend (directly or indirectly) from independent claim 1, are also patentable for at least the same reasons as described with respect to claim 1.

Independent claims 8, 9, 16, and 23 contain similar limitations as described with respect to claim 1, and it is submitted that such claims are allowable for at least the same reasons as


claim 1. Furthermore, claims 10-15, which depend (directly or indirectly) from claim 9, are also patentable over the cited references for at least the same reasons as claim 9; claims 17-22, which depend (directly or indirectly) from claim 16, are also patentable over the cited references for at least the same reasons as claim 16; and claim 24, which depends from claim 23, is also patentable over the cited references for at least the same reasons as claim 23.

No claim related fees or other fees are believed to be due with this response. In the event any additional fees are due, please debit Deposit Account 08-2623.

The application now appearing to be in form for allowance, reconsideration and allowance thereof is respectfully requested.

Respectfully submitted,

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